

- II. "Description of the Fossil Tusk of an extinct Proboscidian Mammal (*Notelephas australis*, OW.), from Queensland, Australia." By Professor OWEN, C.B., F.R.S., &c. Received March 21, 1882.

(Abstract.)

The author, after referring to the notice of the finding of a molar tooth of a mastodon, in Australia, by Count Strzelecki, in his "Physical Description of New South Wales," p. 312, proceeds to the details of the first evidence of a proboscidian mammal which has reached him from that continent since the date (1845) of the Count's work. This evidence consists of portions of a tusk indicative of an elephantine animal, somewhat less than the existing ones of Asia and Africa. The evidences of the ivory nature of the tusk are given in detail, including the minute characters of that variety of dentine. Figures of the fossil and of the microscopical sections accompany the paper.

The specimen was discovered by Mr. Fred. N. Isaac, in a "drift-deposit of a ravine in a district of Darling Downs, sixty miles to the eastward of Moreton Bay, Queensland, Australia."

- III. "Action of Ethylene Chlorhydrin upon the Bases of the Pyridine Series and on Quinoline." By Professor ADOLPH WURTZ, For. Mem. R.S. Received March 17, 1882.

According to the constitution which is generally attributed to the bases of the pyridine series, they must be considered as tertiary bases, their nitrogen being united to the carbon by three atomicities. The action which alcoholic iodides exert upon these bases, as shown by Hofmann, confirms this idea, which is equally applicable to quinoline. I thought that the reaction of glycol chlorhydrin and similar compounds upon the pyridine bases and upon quinoline should produce oxygenated quaternary bases. It is known, in fact, that such a base, neurine, results from the action of ethylene chlorhydrin upon trimethylamine. The beautiful results which Ladenburg obtained recently by the reaction of chlorhydrin upon secondary bases are well known. He is still continuing these researches to the great profit of science. I myself, entering again on a line of researches which I had formally traced, will describe the results obtained by investigations undertaken in the direction indicated, with the pyridine bases and quinoline.

I had two specimens of collidine at my disposal, presenting the